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10/525,394	10/28/2005	Michifumi Tanga	TANGA11	7184

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EXAMINER	
CROW, ROBERT THOMAS	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,394	TANGA ET AL.	
	Examiner	Art Unit	
	Robert T. Crow	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) *8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 13 July 2007 is acknowledged. The traversal is on the ground(s) that the search would not be burdensome. This is not found persuasive because the claims of the instant 371 national stage application were found to lack unity of invention (where unity of invention requires a special technical feature) due to the lack of a special technical feature between the different groups. Thus the burden of the search of these different inventions is moot.

The requirement is still deemed proper and is therefore made FINAL.

Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 13 July 2007.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent PCT International Application No. PCT/JP03/10406, filed on 18 August 2003.

Preliminary Amendment

3. The preliminary Amendment filed 28 October 2007 is acknowledged and has been entered.

Information Disclosure Statement

4. The Information Disclosure Statement filed 29 December 2005 is acknowledged. However, only the Abstract of Document JP 2002-535676 A is being considered because an English language translation of the remainder of the document has not been provided.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is indefinite because claim 9 is drawn to a solid support comprising a carbon layer, for use in the method of claim 8, which in turn is drawn to the solid support of claim 1, comprising a carbon layer and substances immobilized thereon. It is thus unclear whether the required structural limitations of the instant claim are the same as those of claim 1.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sosnowski et al (U.S. Patent No. 6,051,380, issued 18 August 2000).

Regarding claim 1, Sosnowski et al teach a solid support in the form of the APEX device of Figure 18, wherein the solid support is a large silicon wafer (Example 12, columns 62-64). The solid support comprises a crude DNA selector in the form of an APEX chip which separates DNA from other substances in the specimen (e.g., human cells; column 63, lines 43- 55). The APEX chip separates DNA using electrophoretic transport into a permeation layer comprising polyacrylamide gels (column 22, lines 1-60); thus, the crude DNA selector separates substances in a specimen using gel electrophoresis. The solid support further comprises an APEX analytical chip for hybridization (Figure 18 and column 64,

lines 5-15), wherein the second chip comprises a carbon layer, in the form of carbon electrodes, having nucleic acid probes for hybridization attached thereto (Figure 2 and column 22, lines 1-60). Thus, the substances (i.e., nucleic acids of the specimen) are immobilized on the solid support via hybridization to the probes on the carbon electrode layers.

Regarding claim 3, Sosnowski et al teach the support of claim 1, wherein composites are formed by adding further substances which interact with the immobilized substances; namely, Figure 19 shows complementary target sequences, which are further substances, interacting with the immobilized substances via hybridization to form composites.

Regarding claim 5, Sosnowski et al teach the support of claim 1, wherein the carbon layer has a thickness to 100 microns; namely, the carbon layer is 0.2 to 0.5 microns thick (column 24, lines 30-40).

Regarding claim 6, Sosnowski et al teach the support of claim 1, wherein the carbon layer is activated through chemical modification; namely, a permeation layer and an attachment layer are added on top of the surface (column 25, lines 8-15). The layers expedite immobilization of a target substance because the attachment layer allows attachment of the substances contained in a specimen, which is in accordance with the embodiment of chemical modification presented on pages 13-14 of the instant specification.

Regarding claim 7, Sosnowski et al teach the support of claim 1, wherein the immobilized substances comprise nucleic acids (Figure 2 and column 22, lines 1-60).

Regarding claim 9, Sosnowski et al teach a solid support comprising a carbon layer on a surfaced thereof; namely, a solid support comprising an APEX analytical chip for hybridization (Figure 18 and column 64, lines 5-15), wherein the APEX chip comprises a carbon layer, in the form of carbon electrodes (Figure 2 and column 22, lines 1-60).

It is noted that the courts have held that "while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32

(Fed. Cir. 1997). In addition, "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch &Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Therefore, the various uses recited in claim 9 (e.g., using the support in the method of claim 8) fail to define additional structural elements to the device of claim 9. Because Sosnowski et al teach the structural elements of claim 9, the claim is also anticipated by Sosnowski et al. See MPEP § 2114.

9. Claims 1-3, 5-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001)as evidenced by the Academic Press Dictionary of Science and Technology (San Diego,1992, page 358).

Regarding claims 1-2 and 9, Bienvenut et al teach a solid support. In a single exemplary embodiment, Bienvenut et al teach Figure 1, which shows a solid support in the form of anodic collection membrane. Substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support (i.e., claims 1 and 9; column 3, lines 1-55).

Bienvenut et al teach the solid support is one or more (i.e., two) PVDF membranes (column 4, lines 1-20), which are polyvinyl difluoride membranes (column 4, lines 1-20). Polyvinyl difluoride contains carbon, and thus is "carbonaceous matter" in accordance with the definition of carbonaceous as "containing carbon" provided by the Academic Press Dictionary of Science and Technology (page 358). Thus, because there are two membranes of carbonaceous matter, the first membrane is the solid support and the second uppermost membrane is a carbon layer in accordance with the embodiment of "carbon layers" taught on page 11 of the instant specification.

Beinvenut et al further teach the substances in the specimen are first transferred from the gel to a hydrophilic membrane, followed by subsequent transfer from the hydrophilic membrane to the collection membrane (i.e., instant claim 2; column 4, lines 1-20).

As noted above, apparatus claims cover what a device *is*, not what a device *does*. Therefore, the various uses recited in claim 9 (e.g., using the support in the method of claim 8) fail to define additional structural elements to the device of claim 9. Because the prior art teaches the structural elements of claim 9, the claim is also obvious over the prior art.

Regarding claim 3, Bienvenut et al teach the support of claim 1, further comprising composites formed thereon by adding further substances that interact with the substances immobilized on the solid support; namely, further substances in the form of antibodies are interacted with the support to form composites (Abstract).

Regarding claim 5, Bienvenut et al teach the support of claim 1, wherein the carbon layer has a thickness of a monomolecular layer to 100 microns; namely, the PVDF membrane is 100 microns thick (column 4, lines 1-20). Because the uppermost membrane is 100 microns thick, the top carbonaceous layer is from a monomolecular layer to 100 microns.

Regarding claim 6, Bienvenut et al teach the support of claim 1, wherein the surface of the carbon layer is activated through chemical modification; namely, in an alternate embodiment, the uppermost membrane is the a carboxy activated PVDF carbon layer (column 4, lines 1-20

Regarding claim 7, Bienvenut et al teach the support of claim 1 wherein the immobilized substances are peptides (Abstract).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001) in view of Maynard et al (U.S. Patent Application Publication No. US 2002/0064888 A1, published 30 May 2002).

It is noted that while claims 1-3, 5, 7, and 9 have been broadly rejected under 35 USC 102(b) as described above in Section 9, the claims are also obvious using the more narrow interpretation outlined below.

Regarding claims 1-2, 4-5, and 9, Bienvenut et al teach a solid support. In a single exemplary embodiment, Bienvenut et al teach Figure 1, which shows a solid support in the form of anodic collection membrane. Substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support (i.e., claims 1 and 9; column 3, lines 1-55).

Beinvenut et al further teach the substances in the specimen are first transferred from the gel to a hydrophilic membrane, followed by subsequent transfer from the hydrophilic membrane to the collection membrane (i.e., instant claim 2; column 4, lines 1-20).

As noted above, apparatus claims cover what a device *is*, not what a device *does*. Therefore, the various uses recited in claim 9 (e.g., using the support in the method of claim 8) fail to define additional

structural elements to the device of claim 9. Because the prior art teaches the structural elements of claim 9, the claim is also obvious over the prior art.

Beinvenut et al do not teach the solid support comprises a carbon layer.

However, Maynard et al teach a solid support in the form of an optically active test stack further comprising a layer of diamond-like carbon (i.e., instant claim 4; paragraphs 0017-0020) having a thickness of 1000 Angstroms (paragraph 0065), which 0.1 microns and is between a monomolecular layer and 100 microns (i.e., instant claim 5). Maynard et al further teach the diamond-like carbon layer has the added advantage of having high hardness (paragraphs 0065-0066), thus adding to the durability of the solid support.

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the solid support as taught by Bienvenut et al with the diamond-like carbon layer of Maynard et al with a reasonable expectation of success. The modification would result in a solid support having a carbon layer (i.e., instant claims 1-2 and 9), wherein the carbon layer is a diamond-like carbon layer (i.e., instant claim 4) having a thickness between a monolayer to 100 microns (i.e., instant claim 5). The ordinary artisan would have been motivated to make the modification because said modification would have resulted in a solid support having the added advantage of having high hardness, thereby resulting in a durable support, as explicitly taught by Maynard et al (paragraphs 0065-0066).

Regarding claim 3, the support of claim 1 is discussed above. Bienvenut et al further teach the support has composites formed thereon by adding further substances that interact with the substances immobilized on the solid support; namely, further substances in the form of antibodies are interacted with the support to form composites (Abstract).

Regarding claim 7, the support of claim 1 is discussed above. Bienvenut et al teach the immobilized substances are peptides (Abstract).

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001) in view of Maynard et al (U.S. Patent Application Publication No. US 2002/0064888 A1, published 30 May 2002) as applied to claim 1 above, and further in view of Osborn et al (Biotech. and Bioeng, vol. 24, pages 1653-1669 (1982)).

Regarding claim 6, the support of claim 1 is discussed above.

Neither Beinvenut et al nor Maynard et al teach the carbon layer is activated by chemical modification.

However, Osborn et al teach immobilization of substances, in the form of enzymes, to carbon surfaces that have been activated by chemical modification, which has the added advantage of providing covalently bonded immobilized substances possessing increased stability (page 1654).

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the solid support comprising a carbon layer as taught by Bienvenut et al in view of Maynard et al with the activation of the carbon layer as taught by Osborn et al with a reasonable expectation of success. The ordinary artisan would have been motivated to make the modification because said modification would have resulted in a solid support having the added advantage of having increased stability of the immobilized substances as explicitly taught by Osborn et al (page 1654).

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claim 4 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/182,434 in view of Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001. Both sets of claims are drawn to a substance (i.e., an oligonucleotide) immobilized to a carbon layer (i.e., diamond) wherein the surface is modified. The '434 claim does not require separation via gel electrophoresis and transfer of the separated substance.

However, Bienvenut et al teach substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support, which has the added advantage of allowing separation of a large number of substances (i.e., 3000) in a sample (column 3, lines 1-55), which further allows determination of the exact mass of the proteins by MALDI-TOF (column 1, lines 13-30).

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the claims of the '434 application with the separation by electrophoresis and transfer as taught by Bienvenut et al with a reasonable expectation of success. The ordinary artisan would have been motivated to make the modification because said modification would have the added advantage of allowing determination of the exact mass of the proteins by MALDI-TOF as explicitly taught by Bienvenut et al (column 3, lines 1-55 and column 1, lines 13-30).

This is a provisional obviousness-type double patenting rejection.

16. Claims 1-2 and 4-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-6, and 8-9 of copending Application No. 10/240,661 in view of Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001. Both sets of claims are drawn to solid supports (i.e., glass slides), carbon layers, diamond-like carbon, modified surfaces, oligonucleotides or proteins on the surface, and layer thicknesses of 1 micron (i.e., 1000 nm). The additional limitations of the '661 claims are encompassed by the open claim language "comprising" found in the instant claims.

The '661 claims do not require separation via gel electrophoresis and transfer of the separated substance.

However, Bienvenut et al teach substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support through a membrane , which has the added advantage of allowing separation of a large number of substances (i.e., 3000) in a sample (column 3, lines 1-55), which further allows determination of the exact mass of the proteins by MALDI-TOF (column 1, lines 13-30).

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the claims of the '661 application with the separation by electrophoresis and transfer as taught by Bienvenut et al with a reasonable expectation of success. The ordinary artisan would have been motivated to make the modification because said modification would have the added advantage of allowing determination of the exact mass of the proteins by MALDI-TOF as explicitly taught by Bienvenut et al (column 3, lines 1-55 and column 1, lines 13-30).

This is a provisional obviousness-type double patenting rejection.

17. Claims 1-2 and 6-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 21 of copending Application No. 10/363,558 in view of Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001. Both sets of claims are drawn to

solid supports having a carbon layer (i.e., niobium carbide), a modified carbon layer, and immobilized nucleic acid (i.e., DNA) or protein. The additional limitations of the '558 claim is encompassed by the open claim language "comprising" found in the instant claims.

The '558 claims do not require separation via gel electrophoresis and transfer of the separated substance.

However, Bienvenut et al teach substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support through a membrane , which has the added advantage of allowing separation of a large number of substances (i.e., 3000) in a sample (column 3, lines 1-55), which further allows determination of the exact mass of the proteins by MALDI-TOF (column 1, lines 13-30).

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the claims of the '558 application with the separation by electrophoresis and transfer as taught by Bienvenut et al with a reasonable expectation of success. The ordinary artisan would have been motivated to make the modification because said modification would have the added advantage of allowing determination of the exact mass of the proteins by MALDI-TOF as explicitly taught by Bienvenut et al (column 3, lines 1-55 and column 1, lines 13-30).

This is a provisional obviousness-type double patenting rejection.

18. Claims 1-2 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 5-9 of copending Application No. 10/478,674 in view of Bienvenut et al (U.S. Patent No. 6,221,626 B1, issued 24 April 2001. Both sets of claims are drawn to solid supports having a carbon layer (i.e., tungsten carbide) and immobilized peptide. The additional limitations of the '674 claims are encompassed by the open claim language "comprising" found in the instant claims.

The '674 claims do not require separation via gel electrophoresis and transfer of the separated substance.

However, Bienvenut et al teach substances in a specimen are separated in a gel using gel electrophoresis followed by immobilization on the solid support by transfer of the substances in the gel to the solid support through a membrane , which has the added advantage of allowing separation of a large number of substances (i.e., 3000) in a sample (column 3, lines 1-55), which further allows determination of the exact mass of the proteins by MALDI-TOF (column 1, lines 13-30).

It would therefore have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to have modified the claims of the '674 application with the separation by electrophoresis and transfer as taught by Bienvenut et al with a reasonable expectation of success. The ordinary artisan would have been motivated to make the modification because said modification would have the added advantage of allowing determination of the exact mass of the proteins by MALDI-TOF as explicitly taught by Bienvenut et al (column 3, lines 1-55 and column 1, lines 13-30).

This is a provisional obviousness-type double patenting rejection.

Conclusion

19. No claim is allowed.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert T. Crow whose telephone number is (571) 272-1113. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEHANNE SITTON
PRIMARY EXAMINER
8/1/07

Robert T. Crow
Examiner
Art Unit 1634